

# Pediatric headache questionnaire, exam and history forms for the chiropractor

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## ABSTRACT

The academic arm of the European Chiropractic Union (ECU) is the European Academy of Chiropractic (EAC). Within the EAC are special interest groups (SIG) focusing on postgraduate education for chiropractors in the areas of pediatrics, neurology, clinical chiropractic and sports chiropractic. Children are one of the unique populations presenting to the chiropractor requiring a different skill set than that utilized to assess the adult patient. In recognition of this, the EAC's SIG for pediatrics has developed history, examination and questionnaire forms for children with headache. The aim of these forms is to assist the chiropractor in identifying red flags and to skillfully differentially diagnose headaches as they present throughout growth and development. The process of development of these forms is outlined, and three forms are presented in this article.

Key Words: pediatric headache, chiropractic pediatric, pediatric history form, pediatric examination form, pediatric red flags, pediatric questionnaire.

## Introduction

Chiropractic education typically includes a cursory level of education within pediatrics<sup>1</sup> which varies from institution to institution. Chiropractors interested in pediatrics can pursue additional education through courses in continuing professional development (CPD), a diplomate, and/or a Master's degree. These are available through a range of providers. Surveys from 2004 and 2014 assessing random samples of licensed Canadian Doctors of Chiropractic and Naturopaths have shown that the majority of practitioners questioned treated children of all ages, but felt they their education did not provide adequate skills in assessment and treatment.<sup>1</sup>

Triaging musculoskeletal (MSK) and non-MSK complaints is of the highest priority when assessing the pediatric patient with headache.<sup>2</sup> Some apparently benign headache presentations may have serious red flag causes, such as increased intracranial pressure, nocturnal epilepsy, possible brain tumor and/or cerebellar dysfunction.<sup>3</sup> Table 1 provides a check list for Red Flags.

Other conditions which present with headache at first glance may be due to potentially disabling pathology, including mitral valve disease,<sup>4</sup> hypothyroidism<sup>5</sup> and epilepsy.<sup>6</sup> Ability to triage is therefore a vital skill and knowledge base for practitioners to develop when seeing the pediatric patient with headache, as differential diagnosis and treatment vary significantly from the adult patient.<sup>7</sup>

**Table 1. Red Flags<sup>3</sup>**

✓/✗

Features of cerebellar dysfunction:	___ ataxia
	___ nystagmus
	___ intention tremor
Features of increased intracranial pressure:	___ night/early morning vomiting
	___ large head
	___ papilloedema
New neurological deficits:	___ recent squint
	___ focal seizures
Possible brain tumor:	___ progressive symptoms < 3 months
	___ "worst headache ever"
Nocturnal epilepsy:	___ abnormal movement or behavior during sleep
	___ strange noises during sleep
	___ extremely tired in the morning
	___ tongue biting
	___ enuresis
	___ falling out of bed
Waking up at night due to severe headache	___
Change in behavior	___
Change in personality	___
Change in coordination	___
Change in balance	___

**Aims**

The EAC is working to provide postgraduate education for practitioners. One focus of the EAC SIG pediatric group has been to work with the various European chiropractic educational institutions to standardize the level of education within pediatrics. Another primary goal is to raise the advanced education around pediatric practice on an institutional and individual level.

The pediatric SIG is a team of four, each with advanced education within chiropractic and/or pediatrics (post-graduate Master's degree or PhD), and each with expertise in clinical practice, research, and/or education.

Fungible pediatric headache questionnaires, history and examination forms specific to chiropractors and other manual therapists have not yet been made available. Consequently, a key initiative of the SIG over the past year has been to provide special history and examination forms particular to specific problems which present to chiropractors. The headache forms presented in this article have been designed to organize the history and examination for the pediatric headache.

Tables 2 is a questionnaire for the family to fill out, Table 3 is the history form and Table 4 provides an examination for ages 5-16, giving it form and consistency, aiding the practitioner in undertaking a thorough assessment.

These are intended as a screening tool for assessing the pediatric patient presenting with headache. The primary focus is on differential diagnosis of headaches throughout development. Two recent articles focus on headaches in children<sup>8,9</sup> and are a good complement to these forms. One article focuses on differential diagnosis of common headaches in children presenting to the chiropractor<sup>8</sup> and the other details the changing phenotype of migraine headache through growth and development.<sup>9</sup> By highlighting red flag presentations,<sup>3</sup> there is an emphasis on safety, particularly identifying and referring the ill child for medical assessment and care. These forms are helpful in reaching the goal of arriving at the correct diagnosis or diagnoses, in order that the proper management can be recommended.

**Process**

The pediatric headache questionnaire, history, examination

and red flag forms have been reviewed by all members of the SIG in an extensive, iterative process spanning nine months. Within the SIG an initial draft was created, multiple iterations were developed, and meetings were held to discuss and resolve disagreements by consensus. In total, three meetings were held between members of the SIG. This iteration was then shared with and reviewed by chiropractors with expertise in the pediatric patient, and their comments were reviewed by the author. The questionnaire was then translated into Swedish and used with a subset of patients to test its relevance.

**Recommendations for chiropractors**

The author recommend adopting these forms for clinical practice and to use them as an adjunct to the basic pediatric history and exam forms presented earlier.<sup>10</sup> Just as these forms reflect the fact that the child is growing and developing, treatment is also adjusted based on age and development.

Additional special exam forms to complement the history and examination forms for common complaints presenting to the chiropractor, such as the crying infant, growing pains, and scoliosis are currently being developed. A series of recorded lectures to accompany these forms are in progress, discussing key aspects of the history and examination of the pediatric patient. These will be soon available through the European Chiropractic Union home page, European Academy of Chiropractic (EAC) and the General Education Network for Chiropractic (GEN-C).

**Conclusion**

These forms represent a minimum standard for assessing pediatric headache in patients to ensure safe and effective management. The implementation of these forms should not only raise competence of practitioners, but with widespread use, enable data collection on a large scale for future research. The work to provide specific clinical exam forms is to elevate the safety and quality of musculoskeletal care provided by chiropractors to babies, children, and their families.

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**Table 2. Headache Questionnaire (HA): Children**

Genetics: Family history headaches (HA): \_\_\_\_\_

What kind of headaches: \_\_\_\_\_

What are symptoms: \_\_\_\_\_

Do they respond to treatment: \_\_\_\_\_

Psychosocial situation:

Exposure to abuse or bullying: \_\_\_\_\_

Neurodevelopmental disorder (ADHD, ADD, ASP, other): \_\_\_\_\_

anxiety: \_\_\_\_\_ depression: \_\_\_\_\_

counselling: \_\_\_\_\_ gender identity: \_\_\_\_\_

Biomechanical: trauma history \_\_\_\_\_

(including fall \_\_\_\_\_ concussion \_\_\_\_\_ head \_\_\_\_\_ mouth injuries \_\_\_\_\_)

**Health history**

allergy \_\_\_\_\_ asthma \_\_\_\_\_ eczema \_\_\_\_\_ epilepsy \_\_\_\_\_

cardiac anomaly \_\_\_\_\_ CNS infection (borrelia) \_\_\_\_\_ intracranial bleed \_\_\_\_\_

**Headache characteristics**

How old are you today? \_\_\_\_\_ When did headache or headache episodes begin, what age? \_\_\_\_\_

Do you have more than one kind of headache? \_\_\_\_\_

Describe headaches symptoms: \_\_\_\_\_

Where is the headache pain? \_\_\_\_\_

Have headaches changed since they started? \_\_\_\_\_

Do you have neck pain or stiffness? \_\_\_\_\_

How long does a headache episode last? \_\_\_\_\_

How strong is the pain? 0= no pain, 10= worst pain ever: \_\_\_\_\_

Is your headache worse with running or straining yourself? \_\_\_\_\_

Is your headache worsened by prolonged screen time? \_\_\_\_\_ Studying or reading? \_\_\_\_\_

How much screen time (phone, iPad, laptop) per school day? \_\_\_\_\_ How much on weekends? \_\_\_\_\_

What triggers your headaches? \_\_\_\_\_

Are you stressed? \_\_\_\_\_

What relieves your headache? \_\_\_\_\_ Does sleep relieve headache? \_\_\_\_\_

How often do you take medication, what kind? \_\_\_\_\_ Does medication help? \_\_\_\_\_

Does the headache interfere with school \_\_\_\_\_ Sports \_\_\_\_\_ Social activities \_\_\_\_\_ Screen time \_\_\_\_\_

Do you see the board in school well? \_\_\_\_\_ Have you checked your vision? \_\_\_\_\_

**History of Periodic syndromes**

Infancy: colic \_\_\_\_\_ torticollis \_\_\_\_\_

Toddler: seeking dark room \_\_\_\_\_ head banging \_\_\_\_\_

Child: dizziness \_\_\_\_\_ leg pain \_\_\_\_\_ stomach pain \_\_\_\_\_ repeated vomiting \_\_\_\_\_ light sensitive \_\_\_\_\_

sound sensitive \_\_\_\_\_ nausea \_\_\_\_\_ vomiting \_\_\_\_\_ motion sickness \_\_\_\_\_

episodes of fever not related to an illness \_\_\_\_\_ joint pain \_\_\_\_\_

visual disturbances \_\_\_\_\_ seeing flashing spots \_\_\_\_\_ feeling pins and needles \_\_\_\_\_

behavior problems \_\_\_\_\_ ADHD \_\_\_\_\_

sleep history \_\_\_\_\_

sleep disturbances: grinding teeth \_\_\_\_\_ night terrors \_\_\_\_\_ nightmares \_\_\_\_\_ apnea \_\_\_\_\_ snoring \_\_\_\_\_

**Table 3. Headache history children from 5 year**

Family history HA: \_\_\_\_\_  
 what kind: \_\_\_\_\_

Symptoms: \_\_\_\_\_

Treatment/outcome: \_\_\_\_\_

Psychosocial situation family and peers: signs of abuse \_\_\_\_\_ bullying \_\_\_\_\_

Neurodevelopmental disorder \_\_\_\_\_ anxiety \_\_\_\_\_ depression \_\_\_\_\_

Trauma history: head and/or neck \_\_\_\_\_ mouth \_\_\_\_\_ fall \_\_\_\_\_

**Health history**

allergy \_\_\_\_\_ asthma \_\_\_\_\_ eczema \_\_\_\_\_

CNS infection (borrelia) \_\_\_\_\_ intracranial bleed \_\_\_\_\_ surgeries \_\_\_\_\_

perinatal complications \_\_\_\_\_ illnesses \_\_\_\_\_ epilepsy \_\_\_\_\_

cardiac anomalies \_\_\_\_\_ hypothyroidism \_\_\_\_\_

medications/treatment: \_\_\_\_\_

other: \_\_\_\_\_

**Headache characteristics**

At what age did headaches begin \_\_\_\_\_ Where is the headache \_\_\_\_\_

Symptoms: \_\_\_\_\_

duration \_\_\_\_\_ intensity \_\_\_\_\_ frequency \_\_\_\_\_ neck pain \_\_\_\_\_

Have headaches changed since they started? \_\_\_\_\_

Exacerbating factors: physical activity \_\_\_\_\_ homework/screen time \_\_\_\_\_ other \_\_\_\_\_

Headache triggers \_\_\_\_\_

Aggravating factors \_\_\_\_\_

Relieving factors: sleep \_\_\_\_\_ rest \_\_\_\_\_ other \_\_\_\_\_

ADL impact (e.g. school attendance, social and sports activities): \_\_\_\_\_

Medication use and response: \_\_\_\_\_

screen time: \_\_\_\_\_ school days \_\_\_\_\_ weekends \_\_\_\_\_

Stress pattern of headache during holiday \_\_\_\_\_ Eye sight checked \_\_\_\_\_

**History of periodic syndromes**

Infancy: colic \_\_\_\_\_ benign paroxysmal torticollis \_\_\_\_\_

Toddler: seeking dark room \_\_\_\_\_ head banging \_\_\_\_\_

Child: vertigo \_\_\_\_\_ limb pain \_\_\_\_\_ abdominal pain \_\_\_\_\_ cyclical vomiting \_\_\_\_\_ photophobia \_\_\_\_\_

phonophobia \_\_\_\_\_ visual aura \_\_\_\_\_ sensory aura \_\_\_\_\_ nausea \_\_\_\_\_ vomiting \_\_\_\_\_

dizziness \_\_\_\_\_ pallor \_\_\_\_\_ motion sickness \_\_\_\_\_ anorexia \_\_\_\_\_

Behavior problems: \_\_\_\_\_

Sleep history: \_\_\_\_\_

Sleep Disturbances: \_\_\_\_\_ bruxism \_\_\_\_\_ night terrors \_\_\_\_\_ nightmares \_\_\_\_\_

apnea \_\_\_\_\_ snoring \_\_\_\_\_

Thoracic or low back pain: \_\_\_\_\_

**Table 4. Headache Examination Child 5-16****Evaluation of musculoskeletal dysfunction in children with headache**

**Postural examination** forward head posture \_\_\_\_\_ kyphosis \_\_\_\_\_ upper cross syndrome \_\_\_\_\_  
lordosis \_\_\_\_\_ scoliosis \_\_\_\_\_ torticollis \_\_\_\_\_  
plagiocephaly \_\_\_\_\_

**Manual joint palpation** cervical/costovertebral/thoracic joints \_\_\_\_\_  
cranio-cervical flexion test: \_\_\_\_\_ flexion-rotation test R: \_\_\_\_ L: \_\_\_\_  
active ROM: cervical \_\_\_\_\_ thoracic \_\_\_\_\_ lumbar \_\_\_\_\_  
range of motion shoulder joint: R: \_\_\_\_ L: \_\_\_\_ costovertebral joints \_\_\_\_\_  
trigger point palpation cervical/thoracic musculature: \_\_\_\_\_  
TMJ exam with asymmetry or orofacial pain: R: \_\_\_\_ L: \_\_\_\_  
eye sight \_\_\_\_\_ eye tracking \_\_\_\_\_ accommodation \_\_\_\_\_ nystagmus \_\_\_\_\_

**Neurological examination**

mental Status: interaction with parents \_\_\_\_\_ following instructions \_\_\_\_\_  
motor function and balance: hop \_\_\_\_\_ skip \_\_\_\_\_ jump \_\_\_\_\_ gait \_\_\_\_\_  
stand on one leg (eyes open): R: \_\_\_\_ L: \_\_\_\_ eyes closed: R: \_\_\_\_ L: \_\_\_\_  
finger to nose \_\_\_\_\_ rapid alternating hand movements: \_\_\_\_\_  
standing eyes shut, feet together, resist gentle push to side : R: \_\_\_\_ L: \_\_\_\_  
reflexes: \_\_\_\_\_  
sensation: face \_\_\_\_\_ arms \_\_\_\_\_ legs \_\_\_\_\_  
strength: \_\_\_\_\_ toe walk \_\_\_\_\_ heel walk \_\_\_\_\_ walk on toes \_\_\_\_\_ squeeze fingers \_\_\_\_\_  
Babinski \_\_\_\_\_

**Cranial nerves**

CN1: identify specific smell with eyes closed \_\_\_\_\_  
CN2: identify colors \_\_\_\_\_ numbers \_\_\_\_\_  
CN3, 4, 6: eyes following object through visual field \_\_\_\_\_ pupillary response \_\_\_\_\_  
CN 5: chewing \_\_\_\_\_  
CN 7: smile, taste \_\_\_\_\_  
CN 8: hearing, balance \_\_\_\_\_  
CN 9: swallowing \_\_\_\_\_  
CN 10: gag, swallow \_\_\_\_\_  
CN 11: shrug shoulder \_\_\_\_\_  
CN 12: stick out tongue \_\_\_\_\_

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